Abstract

The invention relates to a catalyst-containing gas diffusion layer for fuel cells, in particular low-temperature fuel cells, e.g. PEMFCs and DMFCs. The gas diffusion layer is used on the anode side of the fuel cell and contains catalyst components which effect removal of carbon monoxide (in the PEMFC) or oxidation of methanol (in the DMFC). The catalyst components are produced directly in the porous substrate material from suitable precursor compounds by heat treatment and are distributed uniformly over the entire volume of the gas diffusion layer. As a result, the catalyst components have a particularly high activity. Furthermore, a process for producing a catalyst-containing gas diffusion layer is described.

The gas diffusion layers are used in membrane-electrode units (MEUs) for low-temperature fuel cells, in particular for PEM fuel cells operated using a CO-containing reformate gas. They can also be used in direct methanol fuel cells (DMFCs).